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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,923	05/02/2007	Naohisa Tachiya	Q97359	5287

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EXAMINER

O SULLIVAN, PETER G

ART UNIT	PAPER NUMBER
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1621

NOTIFICATION DATE	DELIVERY MODE
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04/05/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/594,923	Applicant(s) TACHIYA ET AL.	
	Examiner Peter G. O'Sullivan	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09/29/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

Claims 1-21 are pending in this application which should be reviewed for errors.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Takayanagi, US 5945,564. Takayanagi disclose 2,2-dideutero-aminolevulinic acid salts including the nitrate phosphate, methanesulfonate and toluenesulfonate salts and both solid and liquid dosage forms as contrast media. The number of salts listed is sufficiently small that one of ordinary skill in the art would immediately have a grasp of the invention.

Claims 1-7, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshida et al, US 5,489,572. Yoshida et al. disclose 5-aminolevulinic acid and salts including the nitrate and phosphate salts and both solid and liquid fertilizer forms. The number of salts listed is sufficiently small that one of ordinary skill in the art would immediately have a grasp of the invention. Yoshida et al. disclose the reduction of nitrate nitrogen and oxalic acid in plants which can be regarded as plant activation

Claims 1-7, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuramochi et al, US 5,661,111. Kuramochi et al. disclose 5-aminolevulinic acid and salts including the nitrate and phosphate salts and both solid and liquid fertilizer forms. The number of salts listed is sufficiently small that one of ordinary skill in the art would

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immediately have a grasp of the invention. Kuramochi et al. disclose the compounds improve tolerance to high salinity which can be regarded as plant activation.

Claims 1-7, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al., US 5,298,482, Tanaka et al. disclose 5-aminolevulinic acid and salts including the nitrate and phosphate salts and both solid and liquid fertilizer forms. The number of salts listed is sufficiently small that one of ordinary skill in the art would immediately have a grasp of the invention. Tanaka et al. disclose the compounds increase plant yield which can be regarded as plant activation.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Disuke et al., JP 5310657, taken with Takayanagi, US 5945,564, Kuramochi et al, US

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5,661,111, and Tanaka et al., US 5,298,482. Disuke et al. disclose a process for adsorbing carboxyl and amino group containing compounds and eluting with ammonia. The difference between the instant invention and Disuke et al. is that applicants 5-aminolevulinic acid salts are not shown. 5-aminolevulinic acid is analogous to the compounds shown and the mixing with acids to form salts is well known in the art. It would have been prima facie obvious to one of ordinary skill in the art to use the process of Disuke et al. to refine 5-levulinic acid, to mix with appropriate acids and to expect to produce applicants' salts in view of the teaching of the secondary references those salts are useful.

Claim 20 is allowable, but objected to as dependent on a rejected claim.

Any inquiry concerning this communication should be directed to Peter G. O'Sullivan at telephone number (571)272-0642.

/Peter G O'Sullivan/

Primary Examiner, Art Unit 1621

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